

Application No.: 09/987,699

Docket No.: 22130-00006-US

REMARKS*Introduction*

Receipt of the Office Action mailed September 3, 2003 is acknowledged. The present amendment proposes amending claim 1 to incorporate features of claim 2 therein and claim 2 would accordingly be canceled. No new matter would be presented. Moreover, the present proposed amendment does not raise any new issues since the features of claim 2 were already considered by the Examiner presumably in the prior action. New dependent claim 9 is added to round out coverage for the invention. Support for claim 9 can be found throughout the specification and claims as originally filed, for example, at the beginning of the "Description of the Invention" section on page 4. Entry of the amendment and favorable reconsideration are respectfully requested.

Renewal of Request for Rejoinder

Applicant renews its request for rejoinder of claim 8 upon indication of allowance of claim 1 that it is dependent thereon. Since claim 8 necessarily includes the features of claim 1 therein and is by definition under 112, 4th paragraph, narrower in scope, claim 8 is allowable for the same reasons that claim 1 is allowable. Thus, the Examiner's traversal is on the grounds that a search for the non-elected product would "clearly involve a search in subclass(es) in class 420 and/or 428" is not believe to be correct. Claim 8 requires the PROCESS of claim 1 to be utilized to produce a clad strip, and hence the indicated subclasses would not be those that pertain most closely thereto. With respect to *Ochiai*, Applicants are aware that if a product claim is found to be allowable, then claims directed to a process of making or using that particular product should also be considered allowable and rejoined if appropriate. Applicants respectfully urge that under the spirit of the *Ochiai* guidelines, methods of use (here a product produced therefrom, a defacto method of use) Rejoinder is thus respectfully requested.

Rejection Based on 103

Claims 1-7 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Sontgerath et al. (U.S. Patent 6,294,272) in view of Papich et al. (U.S. Patent 5,476,725).

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As stated in the previous Office Action, the Examiner has taken the position that Sontgerath discloses a process for making brazed assemblies substantially as set forth in lines 3-10 of instant claim 1, i.e. casting, homogenizing, cladding to another alloy, hot rolling, cold rolling, and annealing. The Examiner admits that Sontgerath does not disclose a strain hardening step as recited in the instant claims, and the alloy used in Songerath contains a higher percentage of chromium and zirconium than that used in the presently claimed process. However, the Examiner specifically states that these differences are not seen as resulting in a patentable distinction between the prior art and the claimed invention. The basis of his conclusion is as follow allegedly because at Column 2, Papich indicates it to be conventional in the art to strain harden 3000 series aluminum alloys which have been cast, homogenized, hot and cold rolled, and annealed, and which are to be used in making brazed assemblies. Thus, to incorporate a final strain hardening step into the process as disclosed by Sontgerath would have been considered obvious by a person of ordinary skill in the art. The Examiner also believes that because Papich at column 13, line 45 discloses an H14 temper, this product would "likely result in an amount of deformation within the presently claimed ranges."

Applicants respectfully disagree. First of all, as stated in Applicants' prior response, Papich prefers to employ strain hardening to a H24 temper (see col. 7), which would fail to obtain a permanent deformation between 2 and 10% as claimed in claim 1. Enclosed herewith is a table from the reference textbook "Aluminum", vol. 1, page 80, which explains the meaning of temper designations for strain-hardened alloys. For H1x tempers, it is mentioned that the "degree" of strain hardening is set by the second digit, which varies from H12 (quarter-hard) to H18 (full-hard), and which is produced with approximately 75% reduction. Then H14 corresponds to half-hard, and, since here, the relationship between reduction and strain hardening is approximately linear, we estimate that the reduction rate that likely corresponds to H14 is about 37%, far higher than 10%.

As stated at the bottom of page 4 of the specification and recited in new claim 9, a final recrystallized structure is desirable in order to avoid dislocations after brazing. Such a microstructure can be obtained by the claimed combination of homogenization before hot rolling and a recrystallization annealing. Furthermore, by employing relatively low quantities of "anti-recrystallization elements" such as Cr, Zr, Hf, V or Sc in the core as now positively recited in

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amended claim 1, the recrystallized microstructure can be maintained, even after a slight strain-hardening step.

Contrary to what is now recited in claim 1, all examples of Sontgerath have $\text{Cr} + \text{Zr} > 0.02\%$ (see col. 8, table 1) and 9 of the 12 examples show $\text{Cr} + \text{Zr} > 0.20\%$. Furthermore, the sheets of the example are annealed (see col. 7, line 51) without further strain hardening. Thus there is simply no teaching or suggestion in either Sontgerath or Papich, taken alone or in combination, to employ a process as claimed.

This rejection is believed to be improper and should be withdrawn. The Examiner is respectfully requested to reconsider and withdraw the rejection based on Sontgerath and Papich.

Rejection Based on Double Patenting

Claims 1-7 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 8, 15 and 21 of U.S. Patent No. 6,451,453 in view of Papich et al. The Examiner has taken the position that the cited claims of the '453 patent recite a process for making a strip for use in a brazed heat exchanger made of an alloy, but do not recite a strain hardening step. Applicants respectfully submit that this rejection fails for the same reasons as advanced above *inter alia* since neither the claims of the '453 patent nor Papich et al. teach or suggest including a strain hardening step or keeping the contents of Cr, Zr, Hf, V or Sc to be a maximum of about 0.01%.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 22-0185, under Order No. 22130-00006-US from which the undersigned is authorized to draw.

Dated: Oct 30, 2003

Respectfully submitted,

By Susan E. Shaw McBee

Susan E. Shaw McBee

Registration No.: 39,294

CONNOLLY BOVE LODGE & HUTZ LLP

1990 M Street, N.W., Suite 800

Washington, DC 20036-3425

(202) 331-7111

(202) 293-6229 (Fax)

Attorney for Applicant